AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

1. (Previously Presented) An impedance measurement system for measuring skin impedance in a small skin region, comprising:

an electrode unit having a plurality of current supply electrodes for supplying a constant current and a plurality of measurement electrodes separate from the current supply electrodes for measuring a response signal of skin, a first electrode distance adjuster for adjusting a distance between the current supply electrodes, and a second electrode distance adjuster for adjusting a distance between the measurement electrodes, wherein:

the first electrode distance adjuster includes a first stationary screw line connected to the current supply electrodes, a first rotary screw joined to the first stationary screw line and rotating the first stationary screw line to move the current supply electrodes along the first stationary screw line, and a separate fixing stud for fixing each of the current supply electrodes to the first stationary screw line,

the second electrode distance adjuster includes a second stationary screw line connected to the measurement electrodes, a second rotary screw joined to the second stationary screw line and rotating the second stationary screw line to move the measurement electrodes along the second stationary screw line, and a separate fixing stud for fixing each of the measurement electrodes to the second stationary screw line, and

the first stationary screw line and the second stationary screw line are separated from each other by a predetermined distance and are perpendicular to each other; and

a current source for supplying the constant current to the current supply electrodes, wherein the skin impedance is obtained from the measured response signal.

2. (Cancelled).

3. (Previously Presented) The impedance measurement system as claimed in claim 56, wherein the first electrode has a first side, a second side perpendicular to the first side, and a third side perpendicular to the second side and facing the first side; and

the second electrode has a same shape as the first electrode, the second electrode being disposed separate from the first electrode such that an opening side of the second electrode faces an opening side of the first electrode.

4. (Previously Presented) The impedance measurement system as claimed in claim 56, wherein the measurement electrodes are disposed perpendicular to the first and second electrodes.

5. (Previously Presented) The impedance measurement system as claimed in claim 59, wherein the third electrode has a first side, a second side perpendicular to the first side, and a third side perpendicular to the second side and facing the first side; and

the fourth electrode has a same shape as the third electrode, the fourth electrode being disposed separate from the third electrode such that an opening side of the fourth electrode faces an opening side of the third electrode.

6. (Previously Presented) The impedance measurement system as claimed in claim 59, wherein the third and fourth electrodes are disposed perpendicular to the plurality of current supply electrodes.

7. (Previously Presented) The impedance measurement system as claimed in claim 56, wherein the first electrode has an oval structure with an opening portion and a predetermined curvature; and

the second electrode has a same shape as the first electrode, the second electrode being disposed separate from the first electrode such that an opening of the second electrode faces an opening of the first electrode.

8. (Previously Presented) The impedance measurement system as claimed in claim 55, wherein the measurement electrodes are disposed perpendicular to the first and second electrodes.

9. (Previously Presented) The impedance measurement system as claimed in claim 59, wherein the third electrode has an oval structure with an opening portion and a predetermined curvature; and

a fourth electrode has a same shape as the third electrode, the fourth electrode being disposed separate from the third electrode such that an opening of the fourth electrode faces an opening of the third electrode.

10. (Previously Presented) The impedance measurement system as claimed in claim 58, wherein the third and fourth electrodes are disposed perpendicular to the plurality of current supply electrodes.

11-16. (Cancelled).

17. (Original) The impedance measurement system as claimed in claim 1, wherein the current source comprises:

an input unit for dividing a voltage received from an external power supply unit into predetermined voltages and for outputting the predetermined voltages;

a current converter for converting each of the predetermined voltages into a constant current regardless of a load;

a current intensity controller for adjusting an intensity of the constant current output from the current converter using variable resistance; and

an output unit for applying the current received from the current converter to the electrode unit.

18. (Cancelled).

19. (Previously Presented) The impedance measurement system as claimed in claim 60, wherein the signal processing unit comprises:

a buffer for maintaining an input impedance higher than a skin resistance and for temporarily storing the response signals;

a potential difference measurer for measuring a potential difference between the measurement electrodes using the response signals and for outputting a potential difference signal;

an offset voltage controller for performing a zero adjustment for the impedance measurement system and for adjusting a direct current level of the potential difference signal received from the potential difference measurer to shift a measuring range;

an amplifier for amplifying the potential difference signal output from the offset voltage controller up to a predetermined level;

a filter for removing noise from the amplified potential difference signal; and

a phase inverter amplifier for amplifying the noise-filtered potential difference signal and for inverting a phase of the noise-filtered potential difference signal.

20-23. (Cancelled).

24. (Previously Presented) The impedance measurement system as claimed in claim 1, further comprising an image display unit including:

a data analyzer for performing a predetermined operation on a potential difference signal received from a signal conversion unit and for outputting analyzed data;

an operation controller for determining an operation to be performed by the data analyzer; and

a display unit for converting the analyzed data into an image signal and for outputting the image signal.

25-27. (Cancelled).

28. (Previously Presented) An impedance measurement electrode used to measure skin impedance in a small skin region, comprising:

a plurality of current supply electrodes for supplying a constant current to skin;

a plurality of measurement electrodes, which are separated from the current supply electrodes, for measuring a response signal of the skin;

a first electrode distance adjuster for adjusting a distance between the current supply electrodes; and

a second electrode distance adjuster for adjusting a distance between the measurement electrodes, wherein:

the first electrode distance adjuster includes a first stationary screw line connected to the current supply electrodes, a first rotary screw joined to the first

stationary screw line and rotating the first stationary screw line to move the current supply electrodes along the first stationary screw line, and a separate fixing stud for fixing each of the current supply electrodes to the first stationary screw line,

the second electrode distance adjuster includes a second stationary screw line connected to the measurement electrodes, a second rotary screw joined to the second stationary screw line and rotating the second stationary screw line to move the measurement electrodes along the second stationary screw line, and a separate fixing stud for fixing each of the measurement electrodes to the second stationary screw line, and

the first stationary screw line and the second stationary screw line are separated from each other by a predetermined distance and are perpendicular to each other.

29. (Original) The impedance measurement electrode as claimed in claim 28, wherein the measurement electrodes have a thickness of about 0.8 mm.

30. (Cancelled).

31. (Previously Presented) The impedance measurement electrode as claimed in claim 64, the first electrode has a first side, a second side perpendicular to the first side, and a third side perpendicular to the second side and facing the first side; and

the second electrode has a same shape as the first electrode, the second electrode being disposed separate from the first electrode such that an opening of the second electrode faces an opening of the first electrode.

32. (Previously Presented) The impedance measurement electrode as claimed in claim 64, wherein the measurement electrodes are disposed perpendicular to the first and second electrodes.

33. (Previously Presented) The impedance measurement electrode as claimed in claim 67, wherein the third electrode has a first side, a second side perpendicular to the first side, and a third side perpendicular to the second side and facing the first side; and

the fourth electrode has a same shape as the third electrode, the fourth electrode being disposed separate from the third electrode such that an opening side of the fourth electrode faces an opening side of the third electrode.

34. (Previously Presented) The impedance measurement electrode as claimed in claim 67, wherein the third and fourth electrodes are disposed perpendicular to the plurality of current supply electrodes.

35. (Previously Presented) The impedance measurement electrode as claimed in claim 64, wherein the first electrode has an oval structure with an opening portion and a predetermined curvature; and

the second electrode has a same shape as the first electrode, the second electrode being disposed separate from the first electrode such that an opening of the second electrode faces an opening of the first electrode.

36. (Previously Presented) The impedance measurement electrode as claimed in claim 61, wherein the measurement electrodes are disposed perpendicular to the current supply electrodes.

37. (Previously Presented) The impedance measurement electrode as claimed in claim 67, wherein the third electrode has an oval structure with an opening portion and a predetermined curvature; and

a fourth electrode has a same shape as the third electrode, the fourth electrode being disposed separate from the third electrode such that an opening of the fourth electrode faces an opening of the third electrode.

38. (Previously Presented) The impedance measurement electrode as claimed in claim 65, wherein the third and fourth electrodes are disposed perpendicular to the plurality of current supply electrodes.

39. (Previously Presented) The impedance measurement electrode as claimed in claim 65, wherein a normal line of an open portion of each current supply electrode is perpendicular to a normal line of an open portion of each measurement electrode.

40. (Previously Presented) The impedance measurement electrode as claimed in claim 66, wherein a normal line of an open portion of each current supply electrode is perpendicular to a normal line of an open portion of each measurement electrode.

41-44. (Cancelled).

45. (Previously Presented) The impedance measurement electrode as claimed in claim 28, wherein a distance between the measurement electrodes is less than about 5 mm.

46-52. (Cancelled).

53. (Previously Presented) The impedance measurement system as claimed in claim 1, wherein the measurement electrodes are disposed between the current supply electrodes.

54. (Previously Presented) The impedance measurement system as claimed in claim 53, wherein the plurality of current supply electrodes comprises a first electrode and a second electrode, opposite the first electrode, and wherein the plurality of measurement electrodes are in a space defined between the first and second electrodes.

55. (Previously Presented) The impedance measurement system as claimed in claim 54, wherein at least one of the first electrode, the second electrode and the plurality of measurement electrodes has an open two dimensional shape.

56. (Previously Presented) The impedance measurement system as claimed in claim 55, wherein the first and second electrodes have complementary open two dimensional shapes.

57. (Previously Presented) The impedance measurement system as claimed in claim 56, wherein the plurality of measurement electrodes comprise third and fourth electrodes having complementary open two dimensional shapes.

58. (Previously Presented) The impedance measurement system as claimed in claim 57, wherein the first, second, third and fourth electrodes have a same open two dimensional shape.

59. (Previously Presented) The impedance measurement system as claimed in claim 55, wherein the plurality of measurement electrodes comprise third and fourth electrodes having complementary open two dimensional shapes.

60. (Previously Presented) The impedance measurement system as claimed in claim 1, further comprising a signal processing unit, which is connected to the measurement electrodes, for receiving response signals generated in the skin in response to the applied constant current, for generating a potential difference signal, for removing noise from the potential difference signal, and for amplifying the noise-removed potential difference signal.

61. (Previously Presented) The impedance measurement electrode as claimed in claim 28, wherein the measuring electrodes are disposed between the current supply electrodes.

62. (Previously Presented) The impedance measurement electrode as claimed in claim 61, wherein the plurality of current supply electrodes comprises a first electrode and a second electrode, opposite the first electrode, and wherein the plurality of measurement electrodes are in a space defined between the first and second electrodes.

63. (Previously Presented) The impedance measurement electrode as claimed in claim 62, wherein at least one of the first electrode, the second electrode and the plurality of measurement electrodes has an open two dimensional shape.

64. (Previously Presented) The impedance measurement electrode as claimed in claim 63, wherein the first and second electrodes have complementary open two dimensional shapes.

65. (Previously Presented) The impedance measurement electrode as claimed in claim 64, wherein the plurality of measurement electrodes comprise third and fourth electrodes having complementary open two dimensional shapes.

66. (Previously Presented) The impedance measurement electrode as claimed in claim 65, wherein the first, second, third and fourth electrodes have a same open two dimensional shape.

67. (Previously Presented) The impedance measurement electrode as claimed in claim 63, wherein the plurality of measurement electrodes comprise third and fourth electrodes having complementary open two dimensional shapes.

68. (Previously Presented) The impedance measuring system as claimed in claim 1, wherein the measured response signal is a direct current signal.